

EPA Region 5 Records Ctr.



201904

Five-Year Review Report

Second Five-Year Review Report for Schmalz Dump Town of Harrison Calumet County, Wisconsin

September 2003

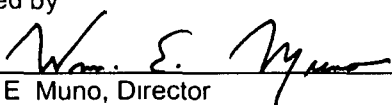
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9/29/03

Table of Contents

List of Acronyms	4
Executive Summary	5
Five-Year Review Summary Form	6
 I. Introduction	 9
 II. Site Chronology	 10
 III. Background	 11
Physical Characteristics	11
Land and Resource Use	11
History of Contamination	12
Initial Response.....	12
Basis for Taking Action	12
 IV. Remedial Actions	 13
Remedy Selection	13
Remedy Implementation	15
System Operations/Operation and Maintenance (O&M)	16
 V. Progress Since the Last Five-Year Review	 17
Protectiveness Statements From Last Review.....	17
Status of Recommendations and Follow-up Actions From Last Review.....	17
Results of Implemented Actions.....	17
Status of Any Other Prior Issues.....	17
 VI. Five-Year Review Process	 18
Notification of the Start of the Review	18
Identification of Five-Year Review Team Members.....	18
Components and Schedule of Five-Year Review	18
Document Review	18
Data Review and Evaluation	18
Community Notification.....	19
Site Inspection.....	19
Site Interviews.....	19
 VII. Technical Assessment	 20
Question A: Is the remedy functioning as intended by the decision documents?	20
Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy still valid?	20

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?	20
Technical Assessment Summary	21
VIII. Issues	21
IX. Recommendations and Follow-up Actions	21
X. Protectiveness Statement(s)	21
XI. Next Review	22
Table	
Table 1 - Chronology of Site Events	10
Attachments	
Attachment 1 - Site Location Map	
Attachment 2 - Site Plan	
Attachment 3 - Monitoring Data	
Attachment 4 - Public Outreach By WDNR	

List of Acronyms

ARAR	Applicable or Relevant and Appropriate Requirement
CAMU	Corrective Action Management Unit
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CTH	County Trunk Highway
EPA	United States Environmental Protection Agency
CFR	Code of Federal Regulations
ECA	Environmental Contamination Assessment
ESD	Explanation of Significant Difference
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
NCP	National Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PRP	Potentially Responsible Party
RA	Remedial Action
RAA	Remedial Action Alternatives
RAO	Remedial Action Objective
RD	Remedial Design
RI/FS	Remedial Investigation/Feasibility Study
RPM	Remedial Project Manager
ROD	Record of Decision
SDWA	Safe Drinking Water Act
VOC	Volatile Organic Compound
WDNR	Wisconsin Department of Natural Resources

Executive Summary

The purpose of this second five-year review is to determine if the remedy selected to address the contamination problem at the Schmalz Dump site in the Town of Harrison, Calumet County, Wisconsin, is protective of human health and the environment. The remedy included the removal of PCB-contaminated sediment and debris in 1988, construction of a clay cap over the waste fill area in 1994, and groundwater monitoring.

The assessment of this five-year review found that the remedy is functioning as designed. The immediate and long-term threats have been addressed and the remedy is expected to be protective of human health and the environment when groundwater cleanup standards are met.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name (from WasteLAN): Schmalz Dump Superfund Site		
EPA ID (from WasteLAN): WID980820096		
Region: 5	State: WI	City/County: Menasha/Calumet
SITE STATUS		
NPL status: Final NPL		
Remediation status (choose all that apply): Complete		
Multiple OUs? Yes - 2	Construction completion date: 9/24/1993	
Has site been put into reuse? NO		
REVIEW STATUS		
Lead agency: Wisconsin Department of Natural Resources		
Author name: Alan Nass		
Author title: Remedial Project Manager	Author affiliation: WDNR, Northeast Region	
Review period:** 8/1/2003 to 9/30/2003		
Date(s) of site inspection: 8/21/2003 & 9/9/2003		
Type of review: Post-SARA		
Review number: 2 (second)		
Triggering action: Previous Five-Year Review Report		
Triggering action date (from WasteLAN): 10/13/1998		
Due date (five years after triggering action date): 10/13/2003		

* ["OU" refers to operable unit.]

** [Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.]

Five-Year Review Summary Form, cont'd.

Issues:

Groundwater monitoring was stopped temporarily in December of 1998 due to two scheduling errors. The Record of Decision (ROD) called for a year of quarterly monitoring, annual monitoring for the next four years, with the monitoring to be re-evaluated at the end of the five year period (i.e. the first five-year review in October of 1998). A change of Remedial Project Managers (RPM) occurred in December of 1998. A fourth quarter monitoring in early 1999 was not collected due to the first error. This fourth quarterly sampling was to have been part of a year of quarterly monitoring being conducted by the Wisconsin Department of Natural Resources (WDNR) in order to provide a baseline for the water quality at the site. The second error occurred with the new RPM believing that the monitoring schedule had been changed to correlate with the next five-year review in 2003.

Recommendations and Follow-up Actions:

Continue the annual inspection of the cap and fencing. Evaluate the need for annual monitoring and the suitability of going to a five year monitoring schedule. Have the current monitoring wells (installed in 1993) properly surveyed for location purposes. There are numerous small trees and bushes along the protective fencing that should be removed to protect the integrity of the fence. A few small trees and bushes growing near but not on the capped area, should also be removed. The concrete surface seals around several of the wells are cracked and should be replaced.

Protectiveness Statement:

The remedy is expected to be protective of human health and the environment when groundwater standards have been met. The exposure pathways that could result in unacceptable risks, are being controlled by preventing exposure to, or the ingestion of, contaminated soil and groundwater. All threats at the site have been addressed through the removal and capping of contaminated waste materials, and monitoring.

The protectiveness of the remedial action will be verified by obtaining additional groundwater samples to fully evaluate potential migration of the contaminant plume downgradient from the dump and towards Lake Winnebago. The monitoring data from September of 2003 indicates that the remedy is continuing to function as required. All immediate threats at the site have been addressed, and the remedy is expected to be protective of human health and the environment.

Long-Term Protectiveness:

Long-term protectiveness of the remedial action will be verified by obtaining additional groundwater samples to fully evaluate potential migration of the contaminant plume downgradient from the dump and towards Lake Winnebago. Monitoring data will be collected on an annual basis unless re-evaluation concludes that an alternative schedule is suitable.

Other Comments:

None.

**Schmalz Dump
Town of Harrison, Calumet County, Wisconsin
Second Five-Year Review Report**

I. Introduction

The purpose of the five-year review is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify issues found during the review, if any, and identify recommendations to address them.

The Department is preparing this Five-Year Review report pursuant to CERCLA §121 and the National Contingency Plan (NCP). CERCLA §121 states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgement of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

The U.S. EPA interpreted this requirement further in the NCP; 40 CFR §300.430(f)(4)(ii) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

The Wisconsin Department of Natural Resources (WDNR) conducted this second five-year review of the remedy implemented at the Schmalz Dump in the Town of Harrison, Calumet County, Wisconsin. This review was conducted by the State Remedial Project Manager (RPM) for the entire site in August and September of 2003. This report documents the results of the review.

This is the second five-year review for the Schmalz Dump. The triggering action for this statutory review is the completion of the first Five-Year in October 13, 1998. A five-year review is required due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure.

II. Site Chronology

Table 1 - Chronology of Site Events

Event	Date
Filling begins at the site. This included car bodies, stone, trees, waste wood chips, pulp and mash from paper manufacture.	1968
Fly ash and bottom ash from Menasha Utility is deposited.	1972 & 1973
Demolition debris from Allis-Chalmers Corporation facility is deposited.	1978 & 1979
On-site sampling identified PCB contamination within the area of the Allis-Chalmers debris disposal area.	1979
Final listing on EPA National Priorities List.	9/21/1984
Remedial Investigation/Feasibility Study (RI/FS) initiated.	4/1985
Record of Decision (ROD) for the PCB operable unit (OU1) requiring fence around the PCB OU and removal and off-site disposal of PCB contaminated sediments and debris in an approved landfill.	8/13/1985
Fence constructed.	1985
Record of Decision (ROD) for the capping operable unit (OU2) requiring the installation of a low permeability, compacted-earth material cap over approximately seven acres of lead and chromium contaminated soil, implementation of groundwater monitoring for lead and chromium, propose a voluntary well abandonment program.	9/30/1987
Removal and disposal of the PCB contaminated debris and sediments. The solids went to an EPA approved landfill. Follow-up sampling confirmed remaining sediments were below action level of 1 mg/kg.	1987-1988
WDNR, EPA Region 5, and Army Corps of Engineers developed design documents. The approved design was a soil cap.	1988-1992
Contractor initiated clearing and grubbing of the site for construction.	1992
Cap placement, final grading and seeding of the site.	1993-1994
Quarterly groundwater sampling.	1993-1994
Final inspection of the site by the Army Corps of Engineers, USEPA and WDNR.	1994
Contractor's responsibility for maintaining the cap ends and final inspection.	6/1/1995
WDNR became responsible for maintenance and monitoring of the site cover.	6/1/1995
WDNR inspection and groundwater sampling.	4/21/1998
WDNR inspection and groundwater sampling.	7/21/1998
WDNR inspection and groundwater sampling	11/2/1998

Event	Date
EPA first Five Year Review	1998
WDNR inspection.	7/7/1999
WDNR inspection.	7/14/2000
WDNR inspection.	7/18/2000
WDNR inspection.	8/2/2000
WDNR inspection.	8/8/2001
WDNR inspection.	5/31/2002
WDNR inspection / 5 year review	9/9/2003

III. Background

Physical Characteristics

The Schmalz Dump is located in the SE ¼ of the NW ¼ of Section 18, T20N, R18E, in the Town of Harrison, Calumet County, Wisconsin. The Town of Harrison has approximately 5,756 residents (2000 census). The dump is situated about 500 feet north of the north shore of Lake Winnebago and about 700 feet south of the City of Menasha. The City of Menasha has approximately 16,331 residents (2000 census). The ten and one-half acre site includes the capped seven-acre dump and a half-acre wetland. The site is bound to north and west by what were historically wetlands that have been filled for commercial development. The fill contains waste materials, mostly fly ash, bottom ash and construction debris. A wetland borders the east side of the site. A railroad right-of-way is on the southern border. South of the railroad tracks is a residential area called Waverly Beach. Waverly Beach was created by dredging sand from Lake Winnebago to fill the wetlands. In 1984, all residences in the Waverly Beach area were connected to the City of Menasha water system. A number of residents still have private wells, but use them only for watering yards and other outdoor purposes, although incidental drinking water ingestion could continue to occur.

Land and Resource Use

The fenced area that comprises the Schmalz Dump consists of three parcels. The Schmalz property is approximately 5.7 acres in size. Two adjacent properties are about 4.8 acres. The Schmalz property is still owned by Gregory A. Schmalz and has been tax delinquent since 1985. The two adjacent properties are owned by William P. Bojarski and Theodore J. Pawlowski. The lands surrounding these three parcels are owned by a number of different property owners. With the exception of the land immediately to the east that is a wetland, all of the surrounding properties are developed, residentially to the south and east, commercially to the north and west. With the exception of existing wetlands to the east, all surrounding properties have all been filled with a wide variety of materials. The site is completely fenced. Access to the site is restricted through two gates. All of the remaining waste mass is contained beneath an impermeable cap that covers about seven acres.

Municipal water serves the area surrounding the Schmalz Dump. Some of the private residences have private wells that are used for lawns and gardens. These wells would get water from the fractured dolomite aquifer underlying the site. The dominant ground water flow direction in the shallow aquifer is south towards Lake Winnebago.

History of Contamination

The site and the surrounding area were part of a wooded wetland prior to filling. Filling on the site began in 1968. The long-range objective of the filling was to develop the property for residential usage. Available information indicates that wastes disposed on the site at that time included car bodies, stone, trees, waste wood chips, pulp and mash from paper manufacture. In 1972 and 1973, fly ash and bottom ash from Menasha Utility was disposed. In 1978 and 1979, demolition debris from an Allis-Chalmers Corporations facility was disposed at the site.

In 1979, on-site soil sampling identified polychlorinated biphenyl (PCB) contamination within the area of the Allis-Chalmers debris disposal. PCB concentrations were as high as 3100 milligrams per kilogram (mg/kg).

Initial Response

After reviewing data from the Schmalz Dump site, the WDNR recommended to the U.S. EPA that the site be included on the National Priorities List (NPL). The site was placed on the NPL on September 21, 1984. A Remedial Investigation/Feasibility Study (RI/FS) was initiated in April 1985. A Record of Decision (ROD) for operational unit one (OU1) was issued in 1985 to address the public health threat from PCB contamination. That ROD required a fence to be constructed around the PCB contaminated debris, and removal and off-site disposal of the PCB contaminated sediments and debris in an approved landfill. The fence was constructed in 1985 and the removal and disposal of more than 4,500 tons of the PCB contaminated debris and sediments was started in 1987 and completed in 1988. Follow-up sampling confirmed that the remaining sediments were below the action level of 1 mg/kg of PCBs, but were still contaminated with lead and chromium.

With the removal of the PCB contamination, the remaining public health threats were exposure to lead and chromium in soils and ground water. A second ROD was issued in 1987 to address the risks due to lead and chromium. The capping in OU2 was completed in 1994.

Summary for Basis for Taking Action

Contaminants

Hazardous substances that have been released at the site in each media include:

Soil

PCBs

Lead

Chromium

Groundwater

Barium

Chromium

Sediment

PCBs
Lead
Chromium

Surface Water

PCBs
Lead
Chromium

Waste

PCBs
Lead
Chromium

Exposures to exposed waste, contaminated soil/sediments, contaminated groundwater or contaminated surface water are associated with significant human health risks, due to exceedance of EPA's risk management criteria for either the average or the reasonable maximum exposure scenarios. Risks from exposure were significant due to the presence of PCBs and metals.

IV. Remedial Actions

Remedy Selections

OU1 – PCB Operable Unit

The ROD for OU1 was signed on August 13, 1985. This first ROD addressed the threat of PCB contamination at the site. Construction debris and sediments containing elevated concentrations of PCBs were removed from the site and disposed in an approved landfill. The water/solids mixture in the sediments was separated, with the solids going to an EPA approved hazardous waste landfill. The water went through treatment prior to being discharged to the pond on the Schmalz Dump property. The 1985 ROD also required that fencing be placed around OU1. The fence was placed in 1985 and the removal of the PCB contaminated sediments and debris was completed in 1988.

OU2- Soils and Groundwater Operable Unit

The ROD for the OU2 was signed on September 30, 1987. The ROD required construction of a low permeability soil cap over approximately seven acres of the contaminated soil, and ground water monitoring. The ROD also proposed a voluntary well abandonment program for residents between the site and Lake Winnebago, and evaluation of adjacent property under the pre-remedial program. However, these proposals were not to address risks caused by the site.

The WDNR, Region V of the EPA (EPA), and the United States Army Corps of Engineers (COE) developed the design documents during 1988 through 1992. The approved design provided for a cap consisting of enough clean soil (one to ten feet thick) to provide the proper grade. This would be covered with two feet of compacted clay, which would be covered by six inches of topsoil to establish vegetative growth. The contract for construction for the 1987 ROD, included the following components:

- abandonment of 12 existing monitoring wells;
- installation of six new monitoring wells;

- placement and compaction of 38,000 cubic yards of low permeability clay soil;
- placement of 4,300 cubic yards of topsoil;
- establishment of turf and landscaping;
- installation of a perimeter security fence;
- maintenance of the site for one year starting from the date of completion of seeding; and
- four quarters of ground water monitoring.

The remedial design was completed in 1992 with the resulting soil cap being completed in 1994. The lead for the site was then passed from the EPA to the WDNR in 1995.

Remedial Action Objectives (RAOs) were developed as a result of data collected during the Remedial Investigation to aid in the development and screening of remedial alternatives to be considered for the RODs. The RAOs for the Schmalz Dump were divided into the following groups:

Source Control Response Objectives

- Minimize the risks to human health and the environment by removal of the most hazardous and contaminated waste mass;
- Minimize the migration of contaminants from the dump site that could degrade groundwater quality by reducing infiltration of liquids through the remaining waste mass;
- Minimize the migration of contaminants from the dump site that could degrade surface water quality by reducing runoff of liquids from the remaining waste mass;
- Reduce risks to human health by preventing direct contact with, and ingestion of, contaminants in the remaining waste mass; and
- Reduce risks to the environment by preventing direct contact with, and ingestion of, contaminants by eliminating the contact with the remaining waste mass;

The major components of the source control operable unit remedy selected in the ROD included the following:

- Removal of the PCB contaminated debris, sediment and soil with off-site disposal in an approved landfill;
- Construction of a clay cap over the remaining waste mass in accordance with State solid waste regulations. Clean soil fill would be needed to level the waste mass. A low permeability soil cap consisting of 2 feet of compacted earth would be required with six inches of top soil over it for vegetation, a 2 percent slope, and measures to divert surface water; and
- Access and use restrictions on the property. The deed to the Schmalz property acknowledges that a portion of the subject property has been determined hazardous to human health or welfare or the environment by the United States Environmental Protection Agency. The Schmalz property has an EPA access agreement. The neighboring Bojarski & Pawlowski property has an easement agreement.

Ground Water Response Objectives

- Eliminate or minimize the threat posed to human health and the environment by preventing exposure to groundwater contaminants;
- Prevent further migration of groundwater contamination beyond its current extent; and
- Restore contaminated groundwater to Federal and State applicable or relevant and appropriate requirements (ARARs), including drinking water standards, and to a level that is protective of human health and the environment within a reasonable period of time.

The major components of the ground water operable unit remedy selected in the ROD include:

- Groundwater monitoring of existing monitoring wells on the Schmalz Dump property and adjacent properties, and
- Five-year site reviews to assess site conditions, contaminant distributions, and any associated site hazards.

Remedy Implementation

The Remedial Action (RA) consisted of two separate phases; one for fencing of the site and removal of the mass of PCB contaminated materials (OU1), and a second phase for the capping of the site and groundwater monitoring (OU2). A fence was placed around the site in 1985. Removal of the PCB contaminated material began in 1987 and was completed in 1988. The major components of this phase of this portion of the RA were the following:

- Placement of a security fence around most of the Schmalz and parts of two adjacent properties;
- Consolidation and removal of more than 3,500 cubic yards of the PCB contaminated waste mass with disposal in an EPA approved landfill;

The second phase of remedial action began in October of 1992 with the clearing and grubbing of the site. Actual placement of the cap occurred between May and September of 1993. Final grading and seeding occurred in May of 1994. Major components for this phase of the RA include the following:

- Placement and compaction of a clay cap overlain by rooting zone material and topsoil;
- Seeding and mulching the finished slopes; and
- Establishment of a ground water monitoring system;

Chemical Waste Management (CWM) was selected as the construction contractor. CWM prepared a Contractor Quality Control Plan, and the Site Health and Safety Plan, which included separate Dust Control, Spill Control, and Precipitation/Groundwater Control Plans. These plans were reviewed and approved by the COE after necessary revisions were made.

In October 1992, CWM initiated the contract work by clearing and grubbing for the construction. Actual placement of the cap was completed between May and September 1993, and final grading and seeding was completed in May 1994. In addition to the planned work, the COE approved the removal and disposal of an underground tank and its contents. An interim final inspection was conducted in October 1993 and, a final inspection in September 1994. These inspections included attendance by CWM, COE, EPA and WDNR representatives. CWM conducted the quarterly ground water sampling in August 1993, November 1993, February 1994, and June 1994. CWM's period for maintenance of the cap ended in May 1995, when a final mowing and inspection was conducted. The final contract price was approximately \$600,000.

After CWM's contract expired, WDNR became responsible for maintenance and monitoring of the site cover. WDNR initiated inspection and ground water sampling at the site in April 1998. Inspection and sampling was repeated in July and November of 1998. RA construction activities were performed according to specifications.

System Operation/Operation and Maintenance

The WDNR is responsible for conducting long-term maintenance and monitoring of the Schmalz Dump. This should consist of annual inspection, monitoring (groundwater sampling) and any needed maintenance activities. However, groundwater monitoring was stopped temporarily in December of 1998 due to two scheduling errors. The Record of Decision (ROD) called for a year of quarterly monitoring, annual monitoring for the next four years, with the monitoring to be re-evaluated at the end of the five year period (i.e. the first five-year review in October of 1998). A change of Project Managers occurred in December of 1998. A fourth quarter monitoring in early 1999 was not collected due to the first error. This fourth quarterly sampling was to have been part of a year of quarterly monitoring being conducted by the WDNR to provide a baseline of water quality at the site. The second error occurred with the new Project Manager believing that the monitoring schedule had been changed to correspond with the next five-year review in 2003.

The primary activities associated with operations and maintenance (O&M) include the following:

- Visual inspection of the cap with regard to vegetative cover, settlement, stability, and any need for corrective action;
- Inspection of the drainage swales and ditches for blockage, erosion and instability, and any need for corrective action;
- Visual inspection of the fence for structural integrity;
- Inspection of the condition of groundwater monitoring wells; and
- Environmental monitoring of the groundwater in September of 2003 .

Progress Since the Last Five-Year Review

Protectiveness Statements From Last Review

The last five-year review was conducted in 1998 by EPA Region V. The recommendations of that 1998 review were that the WDNR should continue with its program of annual inspections of the site cover, and as needed, to make cap repairs, conduct mowing and take other actions to maintain the integrity of the site cover. Further, that if development of the site is being considered, that the WDNR and the EPA work together to evaluate the proposed development and modify the ROD if necessary. The plan called for the groundwater to be monitored annually for the next three years (i.e. 1999 through 2001) and then reevaluate the monitoring program. At the time of the last five-year inspection, the WDNR was in the process of conducting four quarterly ground water monitoring events in order to provide a baseline for the water quality at the site. The 1998 review stated that even though groundwater exceeding MCLs was migrating in the direction of any remaining residential wells, it was unnecessary to expand the monitoring network to characterize the extent of this migration for the following reasons:

- the downgradient residential wells are screened deeper than the monitoring wells and are believed to be protected from contamination in the shallow aquifer at the site by a geologic confining layer;
- the rate of ground water movement is slow and the movement of trivalent chromium is also very retarded within the aquifer;
- the residential wells are not normally used for drinking purposes;
- the chromium concentration in MW-5 does not appear to be increasing versus time.

The WDNR was considering using a low-flow sampling technique with analysis for total metals to replace the filtered metals analysis of samples collected using bailers. The decision was to be based on comparative testing to be conducted during future sampling events.

Status of Recommendations and Follow-up Actions From Last Review

Annual inspections were made of the site since the last five-year inspection. The fourth and last quarter of groundwater monitoring that was to be collected in February 1999 was not done as explained above. The three years of annual monitoring that were to follow the five-year review of 1998 also were not done. A change in site project managers occurred in late 1998. The new (and current) project manager believed that the monitoring schedule had been changed to correspond with the next five-year review. As a result, no samples were collected. The low-flow technique for sampling and the comparison of results, of filtered vs, unfiltered metals samples in the third quarter gave very compatible results. Discussion has occurred with a developer to construct a warehouse complex on the site. Discussion has also occurred with owners of the adjacent fenced properties on options for development.

Results of Implemented Actions

There were no follow-up actions.

Status of Any Other Prior Issues

There were no other prior issues.

VI. Five-Year Review Process

Notification of the Start of the Review

Notification of the start of the review was given to WDNR staff. Notification was also given to Ted Pawlowski and Bill Bojarski, owners of the two parcels that along with the Schmalz property make up the Schmalz Dump. Notification was also given to the Town of Harrison and the Calumet County Treasurer's Office. A news release was issued to all local news media.

Identification of Five-Year Review Team Members

Review team members are WDNR Project Manager – Alan Nass and USEPA Region V Project Manager - Pamela Molitor.

Components and Schedule of Five-Year Review

Components of the review are the following:

- Document Review;
- Data Review;
- Site Inspection; and
- Five-Year Review Report Development and Review.

The schedule extended through September 30, 2003.

Document Review

The following documents were reviewed:

- Five-Year Review Report, Schmalz Dump, Harrison, Wisconsin, USEPA Region V, Superfund Division, 1998.
- Declaration for the Record of Decision, Schmalz Dump, Harrison, Wisconsin, September 30, 1987.
- Summary of Remedial Alternative Selection, Schmalz Dump Site, USEPA Region V, Superfund Division, 1987.
- Record of Decision, Operable Unit Remedial Alternative Selection, Schmalz Dump, Harrison, Wisconsin, August 13, 1985.

Data Review and Evaluation

Ground water monitoring conducted at the Schmalz Dump is presented in Table 1 in the Appendix. Analysis results from the September 2003 monitoring event show the results to be consistent with the historical data.

The monitoring wells were purged via bailer on August 21, 2003. With the exception of monitoring wells MW-1 and MW-6 (both background wells) all remaining wells had dedicated bailers. Groundwater samples were collected via low flow pump with dedicated tubing on September 9, 2003. The samples were filtered and analyzed for metals.

The results for background wells MW-1 and MW-6 indicate all parameters are well below the MCLs and with one exception, are consistent with historical data. Lead in MW-6 which was found to be above the NR140 Wisconsin Administrative Code Preventative Action Limit (PAL). This is an increase in concentration from previous sampling events. No immediate explanation for this rise is available. Lead was a contaminant of concern from the Schmalz Dump.

The levels of chromium and lead (the two ROD for OU2 contaminants of concern) are consistent with historical data. The level of chromium is above the PAL in MW-2, MW-4 and MW-5. It should be noted that there were no exceedances for lead in any of the on-site (MW-5) or down-gradient wells (MW-2, MW-3 and MW-4) in this latest sampling round. The level of barium in MW-5 was consistent with historical data and continues to be above the PAL. Cadmium in MW-3 showed a slight increase to above the PAL. No immediate explanation for this rise is available.

Chromium and lead were identified in ROD for OU2 as the contaminants of concern. The September 2003 sampling levels were consistent with historical data showing the concentration levels to be stable.

Community Notification

Activities to involve the community in the five-year review were initiated with a public news release prepared by the WDNR (Attachment 4) and sent to all local news media outlets. The release stated that the WDNR was conducting a five-year review at the Schmalz Dump and that members of the public were invited to submit comments to the WDNR by September 12, 2003. There were no responses to the news release.

Site Inspection

A site inspection was conducted on August 21, 2003, by the RPM. The purpose of the inspection was to assess the protectiveness of the remedy, including the maintenance of the perimeter fence, the integrity of the cap, and the condition of the monitoring wells. Groundwater samples were collected on September 9, 2003.

No significant issues were identified. The cap and vegetative cover were in good condition. The perimeter fence was in good condition and the gates were locked. However, small trees and shrubs have grown through/close to the fence in several areas and should be removed. Small bushes and trees were also noted to be located close to, but not in the soil cap. These should also be removed. All of the monitoring wells were secure. However, the concrete collars on several of the wells were cracked and need replacement. Locks on all the wells were rusted and needed replacement at the time of purging.

Site Interviews

No site interviews were conducted.

VII. Technical Assessment

Question A: Is the remedy functioning as intended by the decision documents?

The review of documents, ARARs, risk assumptions, the results of the site inspection, and the analysis results of the groundwater monitoring indicate that the remedy is functioning as intended by the RODs. The removal and proper disposal of the PCB contaminated wastes and sediment and the capping of the remaining contaminated wastes within the landfill has achieved the remedial objectives to minimize the migration of contaminants to groundwater and surface water and prevent direct contact with, or ingestion of, contaminants in waste materials. The effective implementation of institutional controls has prevented exposure to, or ingestion of, contaminated groundwater. Maintenance of the cap has been effective. The monitoring well network provides sufficient data to assess the status of the contaminant plume. No activities were observed that would have violated the institutional controls. The cap and the surrounding area were in good repair, there were no signs of unauthorized access, and no new uses of groundwater were observed. The gate to the site is intact and in good repair.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

There have been no changes in the physical conditions of the site that would affect the protectiveness of the remedy.

ARARs that still must be met at this time and that have been evaluated include: ch. NR 140, Wisconsin Administrative Code (Enforcement Standards and Preventative Action Levels); the Safe Drinking Water Act (SDWA) (40 CFR 141.11-141.16) from which many of the groundwater cleanup levels were derived - [Maximum Contaminant Levels (MCLs), and MCL Goals (MCLGs)]; and ARARs related to monitoring and landfill capping. There have been no changes in these ARARs and no new standards or TBCs affecting the protectiveness of the remedy.

The exposure assumptions used to develop the Human Health Risk Assessment included both current exposures (older child trespasser, adult trespasser) and potential future exposures (young and older future child resident, future adult resident and future adult worker). There have been no changes in the toxicity factors for the contaminants of concern that were used in the baseline risk assessment. These assumptions are considered to be conservative and reasonable in evaluating risk and developing risk-based cleanup levels. No change to these assumptions, or the cleanup levels developed from them is warranted. There has been no change to the standardized risk assessment methodology that could affect the protectiveness of the remedy. The remedy is progressing as expected.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

There is no information generated during the 5-year review process or other information that calls into question the protectiveness of the remedy. While several groundwater monitoring events have been missed since 1998, the analysis results from the September 9, 2003 groundwater monitoring indicate that the levels of contaminants have stabilized and are consistent with previous monitoring.

Technical Assessment Summary

According to the data reviewed and the site inspection, the remedy is functioning as intended by the ROD. There have been no changes in the physical conditions of the site that would affect the protectiveness of the remedy. There has been no changes in the toxicity factors for the contaminants of concern that were used in the baseline risk assessment, and there has been no change to the standardized risk assessment methodology that could affect the protectiveness of the remedy. With the support of the September 2003 groundwater analysis results, there is no other information that calls into question the protectiveness of the remedy.

VIII. Issues

At the start of the five year review, the lack of groundwater monitoring data for the years 1999, 2000, and 2001 (as per 1998 five-year review) were issues of concern. However, the monitoring results from September 2003 were consistent with those of previous years. As such, no issues remain that would be identified as being able to affect the current protectiveness of the remedy. The groundwater monitoring schedule does need to be determined by the EPA and WDNR. Possible future development of the site could negatively affect the protectiveness if proper precautions and procedures are not followed.

IX. Recommendations and Follow-Up Actions

It is recommended that the remedy continue to be implemented in accordance with the provisions of the RODs. The site cap is effectively preventing direct contact exposures to the contaminated soils. The WDNR has established a program to provide annual inspections of the site cover, and as needed, to make cap repairs, conduct mowing and take other actions to maintain the integrity of the site cover. Annual site inspection by the WDNR should continue. Groundwater monitoring should go from being done on an annual basis to corresponding with the five-year reviews. Repairs to the monitoring well collars should be completed before the end of 2004 calendar year. Removal of small trees and shrubs adjacent to the fence and soil cap should also be done during the 2004 calendar year. The current monitoring wells should be properly surveyed in for location purposes. The WDNR will remain the lead agency for inspection and maintenance.

The WDNR should continue to pursue development of the site. If development of the site is being considered, WDNR and EPA intend to work together to evaluate how and whether the development can proceed while still assuring the protection of public health and the environment. In addition, WDNR and EPA will work together to modify the ROD if necessary. The Agencies should show flexibility in response to requests to develop the site, but development options that minimize excavating into the contaminated soil should be preferred.

X. Protectiveness Statement

The remedy is expected to be protective of human health and the environment when groundwater standards have been met. The exposure pathways that could result in unacceptable risks, are being controlled by preventing exposure to, or the ingestion of, contaminated soil and groundwater. All threats at the site have been addressed through the removal and capping of contaminated waste materials, and monitoring.

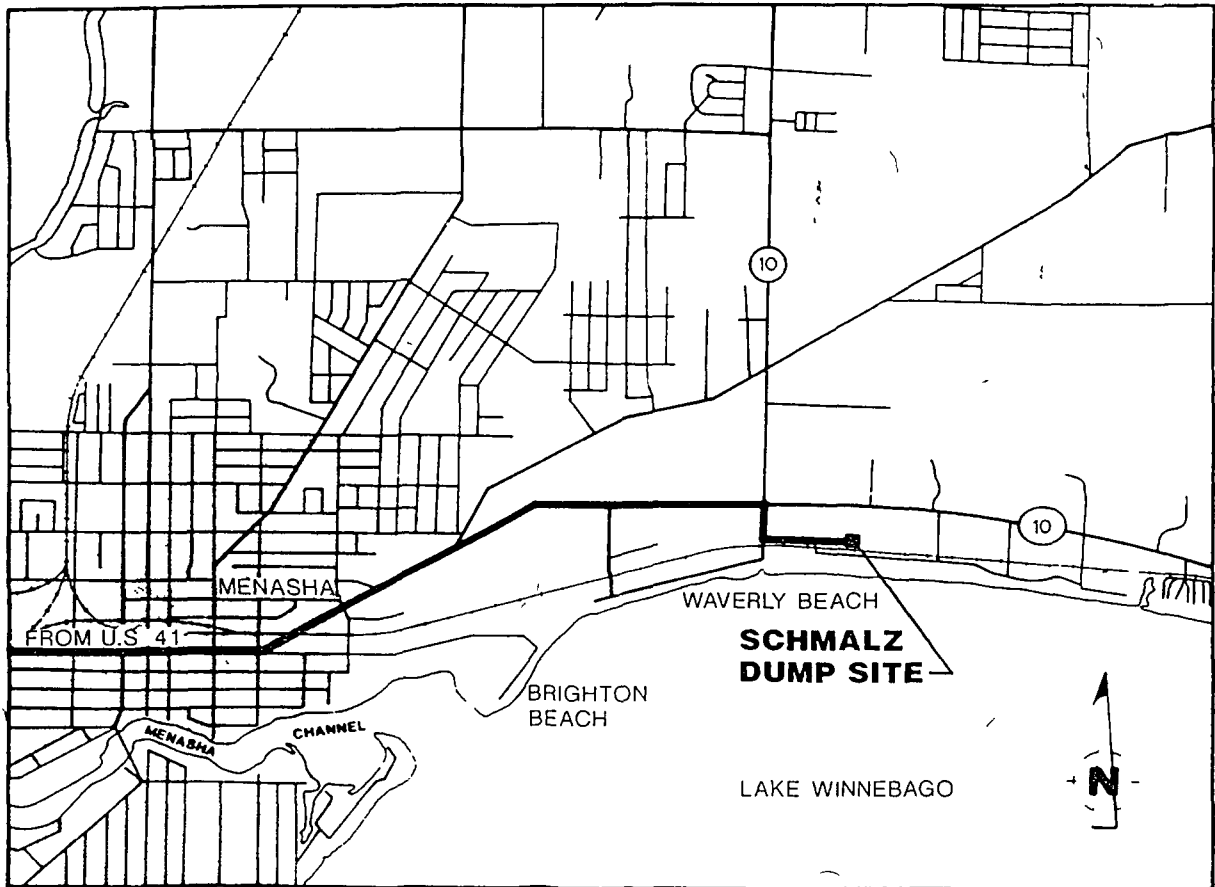
Long-term protectiveness of the remedial action will be verified by obtaining additional groundwater samples to fully evaluate potential migration of the contaminant plume downgradient from the dump and towards Lake Winnebago. Current monitoring data indicate that the remedy is functioning as required.

XI. Next Review

The next five-year review for the Schmalz Dump is required by September of 2008, five years from the date of this review.

ATTACHMENTS

Attachment 1
Site Location Map



Schmalz Dump Site Location Map

No Scale

Attachment 2

Site Plan



Plan Taken From Property Identification Map

Attachment 3

Monitoring Data

Analytical Results for MW-1
Schmalz Dump Superfund Site

TABLE 1

PARAMETER	UNITS	8/93	11/93	2/94	6/94	04/21/1998	07/21/1998	11/02/1998	09/09/2003	NR 140	NR 140		
Metals, dissolved					Duplicate			LF-NF	LF-F	PAL	ES		
Arsenic	ug/l	< 3.0	< 100	< 100	< 100	< 100	< 0.6	0.8	< 0.8	1.1	-	5	50
Barium	ug/l	280	240	220	230	300	110	240	250	250	244	400	2000
Cadmium	ug/l	< 10	< 10	< 10	< 10	< 10	< 0.02	0.08	0.04	0.05	<0.05	0.5	5
Chromium	ug/l	2	< 10	< 10	< 10	10	1.7	2	3	3	2	10	100
Lead	ug/l	< 50	< 50	< 50	< 50	< 50	< 0.4	< 0.8	< 0.8	< 0.8	<1.0	1.5	15
Mercury	ug/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	NA	NA	NA	NA	<0.03	0.2	2
Selenium	ug/l	< 3	< 100	< 100	< 100	< 100	< 1	< 1	< 1	< 1	-	10	50
Silver	ug/l	< 10	< 10	< 10	< 10	< 10	0.28	< 0.2	< 0.2	< 0.2	<0.1	10	50
Common Anions													
Fluoride	mg/l	< 3.2	< 3.2	< 3.2	< 3.2	< 3.2	NA	NA	NA	NA	NA	NS	NS
Chloride	mg/l	13	12	12	10	10	NA	NA	NA	NA	NA	125	250
Nitrite as N	mg/l	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	NA	NA	NA	NA	NA	0.2	1
Bromide	mg/l	< 0.11	0.11	0.14	0.14	0.13	NA	NA	NA	NA	NA	NS	NS
Nitrate as N	mg/l	< 0.028	< 0.025	< 0.025	0.043	0.043	NA	NA	NA	NA	NA	2	10
Sulfate	mg/l	210	170	180	170	170	NA	NA	NA	NA	NA	125	250
PCBs													
PCB 1016	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1221	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1232	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1242	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1248	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1254	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1260	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
Pesticides	ug/l	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	*	*
Miscellaneous													
TOX	ug/l	29.6	50	390	113.2	22.3	NA	NA	NA	NA	NA	NS	NS
TOC	mg/l	35.8	53.4	59	156	105	NA	NA	NA	NA	NA	NS	NS
TSS	mg/l	27	23	10	110	130	NA	NA	NA	NA	NA	NS	NS
Phenol	mg/l	< 0.020	< 0.020	< 0.020	0.0338	NA	NA	NA	NA	NA	NA	1.2	6

LF-NF=Low Flow Sampling Technique and Not Filtered

LF-F=Low Flow Sampling Technique and Filtered

- = Not avail at print

NA = Not Analyzed

ND = Not Detected > PQL

PQL = Practical Quantitation Limit

NS = No Standard

Bold Type = NR 140 PAL Exceedance

Bold Italic Type = ES Exceedance

* = See NR 140 for Pesticide Standards

Analytical Results for MW-2
Schmalz Dump Superfund Site

TABLE 1 (continued)

PARAMETER	UNITS	8/93	11/93			2/94		6/94		04/21/1998	07/21/1998	11/02/1998		09/09/2003	NR 140
Metals, dissolved				Duplicate		Duplicate		Duplicate				LF-NF	LF-F		PAL
Arsenic	ug/l	< 3.0	< 100	< 100	< 100	< 100	< 100	< 100	< 0.6	1.6	< 0.8	< 0.8	-	-	5
Barium	ug/l	240	280	280	240	270	300	280	270	310	410	430	329	400	
Cadmium	ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.02	0.15	0.07	0.08	0.25	0.5	
Chromium	ug/l	19	13	10	10	14	14	15	7.2	10	11	12	14	10	
Lead	ug/l	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 0.4	< 0.8	< 0.8	< 0.8	< 1.0	1.5	
Mercury	ug/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	NA	NA	NA	NA	< 0.03	0.2	
Selenium	ug/l	< 3	< 100	< 100	< 100	< 100	< 100	< 100	2	< 2	< 1	< 1	-	10	
Silver	ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	0.16	0.2	0.25*	0.3	< 0.1	10	
Common Anions															
Fluoride	mg/l	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	NA	NA	NA	NA	NA	NS	
Chloride	mg/l	71	73	73	73	73	83	84	NA	NA	NA	NA	NA	125	
Nitrite as N	mg/l	< 0.36	< 0.36	< 0.36	< 0.72	< 0.72	< 0.72	< 0.72	NA	NA	NA	NA	NA	0.2	
Bromide	mg/l	0.12	< 0.20	0.11	0.11	0.11	0.11	0.13	NA	NA	NA	NA	NA	NS	
Nitrate as N	mg/l	< 0.028	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	NA	NA	NA	NA	NA	2	
Sulfate	mg/l	920	1,100	1,100	1,200	1,200	1,200	1,200	NA	NA	NA	NA	NA	125	
PCBs															
PCB 1016	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	
PCB 1221	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	
PCB 1232	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	
PCB 1242	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	
PCB 1248	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	
PCB 1254	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	
PCB 1260	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	
Pesticides	ug/l	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	*	
Miscellaneous															
TOX	ug/l	49.4	37	27.4	450	1,400	25.8	30.5	NA	NA	NA	NA	NA	NS	
TOC	mg/l	53	69	72.9	69	69	99.7	132	NA	NA	NA	NA	NA	NS	
TSS	mg/l	4	46	49	57	100	66	70	NA	NA	NA	NA	NA	NS	
Phenol	mg/l	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.0247	0.0306	NA	NA	NA	NA	NA	1.2	

LF-NF=Low Flow Sampling Technique and Not Filtered

LF-F=Low Flow Sampling Technique and Filtered

* Matrix Spike QC Exceeded

- = Not avail. at print

NA = Not Analyzed

ND = Not Detected > PQL

PQL = Practical Quantitation Limit

NS = No Standard

Bold Type = NR 140 PAL Exceedance

Bold Italic Type = NR 140 ES Exceedance

* = See NR 140 for Pesticide Standards

TABLE 1 (continued)

NR 140 ES
50
2000
5
100
15
2
50
50
NS
250
1
NS
10
250
0.03
0.03
0.03
0.03
0.03
0.03
0.03
*
NS
NS
NS
6

- = Not avail at print

NA = Not Analyzed

ND = Not Detected > PQL

PQL = Practical Quantitation Limit

NS = No Standard

Bold Type = NR 140 PAL Exceedance

Bold Italic Type = NR 140 ES Exceedance

* = See NR 140 for Pesticide Standards

Analytical Results for MW-3
Schmalz Dump Superfund Site

TABLE 1 (continued)

PARAMETER	UNITS	8/93		11/93	2/94	6/94	04/21/1998	07/21/1998	11/02/1998		09/09/2003	NR 140 PAL	NR 140 ES
Metals, dissolved			Duplicate						LF-NF	LF-F			
Arsenic	ug/l	< 3.0	< 3.0	< 100	< 100	< 100	< 0.6	< 0.8	< 0.8	< 0.8	-	5	50
Barium	ug/l	240	250	250	250	210	230	240	220	220	241	400	2000
Cadmium	ug/l	< 10	< 10	< 10	< 10	< 10	0.1	0.14	0.15	0.16	1.62	0.5	5
Chromium	ug/l	3.9	4.1	< 10	13	< 10	2.3	5	2	1	2	10	100
Lead	ug/l	< 50	< 50	< 50	< 50	< 50	< 0.4	< 0.8	< 0.8	< 0.8	< 1.0	1.5	15
Mercury	ug/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	NA	NA	NA	NA	< 0.03	0.2	2
Selenium	ug/l	< 3	< 3	< 100	< 100	< 100	3	< 1	< 1	< 1	-	10	50
Silver	ug/l	< 10	< 10	< 10	< 10	< 10	< 0.4	< 0.2	< 0.2*	< 0.2	0.1	10	50
Common Anions													
Fluoride	mg/l	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	NA	NA	NA	NA	NA	NS	NS
Chloride	mg/l	22	22	23	22	21	NA	NA	NA	NA	NA	125	250
Nitrite as N	mg/l	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	NA	NA	NA	NA	NA	0.2	1
Bromide	mg/l	< 0.11	< 0.11	0.11	< 0.10	0.4	NA	NA	NA	NA	NA	NS	NS
Nitrate as N	mg/l	0.3	0.27	0.075	0.056	0.044	NA	NA	NA	NA	NA	2	10
Sulfate	mg/l	230	220	230	220	240	NA	NA	NA	NA	NA	125	250
PCBs													
PCB 1016	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1221	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1232	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1242	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1248	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1254	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1260	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
Pesticides	ug/l	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	*	*
Miscellaneous													
TOX	ug/l	15.9	18.3	58	350	23.7	NA	NA	NA	NA	NA	NS	NS
TOC	mg/l	27.8	78	45.6	38	24.4	NA	NA	NA	NA	NA	NS	NS
TSS	mg/l	30	32	140	170	68	NA	NA	NA	NA	NA	NS	NS
Phenol	mg/l	< 0.020	< 0.020	< 0.020	< 0.020	0.0129	NA	NA	NA	NA	NA	1.2	6

LF-NF=Low Flow Sampling Technique and Not Filtered

LF-F=Low Flow Sampling Technique and Filtered

* = Matrix Spike QC Exceeded

- = Not avail. at print

NA = Not Analyzed

ND = Not Detected > PQL

PQL = Practical Quantitation Limit

NS = No Standard

Bold Type = NR 140 PAL Exceedance

Bold Italic Type = NR 140 ES Exceedance

* = See NR 140 for Pesticide Standards

Analytical Results for MW-4
Schmalz Dump Superfund Site

TABLE 1 (continued)

PARAMETER	UNITS	8/93	11/93	2/94		6/94	04/21/1998	07/21/1998	11/02/1998		09/09/2003	NR 140 PAL	NR 140 ES
Metals, dissolved					Duplicate				LF-NF	LF-F			
Arsenic	ug/l	< 3.0	< 100	< 100	< 100	< 100	0.7	< 0.8	2	1.7	-	5	50
Barium	ug/l	200	190	320	280	220	220	240	310	310	317	400	2000
Cadmium	ug/l	< 10	< 10	< 10	< 10	< 10	< 0.02	0.05	0.09	< 0.04	0.28	0.5	5
Chromium	ug/l	18	< 10	19	23	15	29	31	33	30	35	10	100
Lead	ug/l	< 50	< 50	< 50	< 50	< 50	< 0.4	< 0.8	< 0.8	< 0.8	< 1.0	1.5	15
Mercury	ug/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	NA	NA	NA	NA	< 0.03	0.2	2
Selenium	ug/l	< 3	< 100	< 100	< 100	< 100	1	< 1	< 1	< 1	-	10	50
Silver	ug/l	< 10	< 10	< 10	< 10	< 10	0.1	< 0.2	< 0.2*	< 0.2	< 0.1	10	50
Common Anions													
Fluoride	mg/l	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	NA	NA	NA	NA	NA	NS	NS
Chloride	mg/l	48	49	45	39	47	NA	NA	NA	NA	NA	125	250
Nitrite as N	mg/l	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	NA	NA	NA	NA	NA	0.2	1
Bromide	mg/l	0.2	0.23	0.18	0.13	0.48	NA	NA	NA	NA	NA	NS	NS
Nitrate as N	mg/l	< 0.028	< 0.025	< 0.025	< 0.025	< 0.025	NA	NA	NA	NA	NA	2	10
Sulfate	mg/l	1,100	1000	780	680	1,100	NA	NA	NA	NA	NA	125	250
PCBs													
PCB 1016	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1221	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1232	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1242	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1248	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1254	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1260	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
Pesticides	ug/l	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	*	*
Miscellaneous													
TOX	ug/l	36	37.5	720	550	36	NA	NA	NA	NA	NA	NS	NS
TOC	mg/l	112.1	67.2	89	63	62.7	NA	NA	NA	NA	NA	NS	NS
TSS	mg/l	72	280	780	1400	220	NA	NA	NA	NA	NA	NS	NS
Phenol	mg/l	< 0.020	< 0.020	< 0.020	< 0.020	0.0477	NA	NA	NA	NA	NA	1.2	6

LF-NF=Low Flow Sampling Technique and Not Filtered

LF-F=Low Flow Sampling Technique and Filtered

* = Spike QC Exceeded, Spike Recovery is 16.6%

- = Not avail. at print

NA = Not Analyzed

ND = Not Detected > PQL

PQL - Practical Quantitation Limit

NS = No Standard

Bold Type = NR 140 PAL Exceedance

Bold Italic Type = NR 140 ES Exceedance

* = See NR 140 for Pesticide Standards

Analytical Results for MW-5
Schmalz Dump Superfund Site

TABLE 1 (continued)

PARAMETER	UNITS	8/93	11/93		2/94	6/94	04/21/1998		07/21/1998		11/02/1998			
Metals, dissolved				Duplicate				Duplicate		Duplicate	LF-NF	Duplicate	LF-F	Duplicate
Arsenic	ug/l	< 3.0	< 100	< 100	< 100	< 100	2	2.9	3.3	1.5	3.9	2.8	2.5	5.1
Barium	ug/l	350	370	370	310	320	460	470	460	450	550	520	540	550
Cadmium	ug/l	< 10	< 10	< 10	< 10	< 10	0.02	0.04	0.2	0.08	0.17	0.25	0.06	< 0.04
Chromium	ug/l	340	210	200	190	200	160	170	170	170	180	170	170	170
Lead	ug/l	< 50	< 50	< 50	< 50	< 50	< 0.4	< 0.4	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Mercury	ug/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	< 3	< 100	< 100	< 100	< 100	6	2	3	< 1	< 1	< 1	< 1	< 1
Silver	ug/l	< 10	< 10	< 10	< 10	< 10	0.2	0.3	< 0.2	< 0.2	< 0.2*	< 0.2*	< 0.2	< 0.2
Common Anions														
Fluoride	mg/l	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/l	60	65	65	59	56	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite as N	mg/l	< 0.36	< 0.36	< 0.36	< 0.36	< 0.45	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/l	0.18	0.19	0.2	0.17	0.36	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate as N	mg/l	< 0.028	< 0.025	< 0.025	< 0.025	< 0.025	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/l	430	400	400	350	360	NA	NA	NA	NA	NA	NA	NA	NA
PCBs														
PCB 1016	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides	ug/l	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous														
TOX	ug/l	109	206	73.2	99	42.8	NA	NA	NA	NA	NA	NA	NA	NA
TOC	mg/l	182	316	247	360	259	NA	NA	NA	NA	NA	NA	NA	NA
TSS	mg/l	34	140	24	7	23	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	mg/l	< 0.020	< 0.020	< 0.020	< 0.020	0.0384	NA	NA	NA	NA	NA	NA	NA	NA

LF-NF=Low Flow Sampling Technique and Not Filtered

LF-F=Low Flow Sampling Technique and Filtered

* = Matrix Spike QC Exceeded

- = Not avail at print

NA = Not Analyzed

ND = Not Detected > PQL

PQL = Practical Quantitation Limit

NS = No Standard

Bold Type = NR 140 PAL Exceedance

Bold Italic Type = NR 140 ES Exceedance

* = See NR 140 for Pesticide Standards

TABLE 1 (continued)

09/09/2003		NR 140	NR 140
LF-F	Duplicate	PAL	ES
-	-	5	50
482	486	400	2000
<0.05	<0.05	0.5	5
182	180	10	100
<1.0	<1.0	1.5	15
<0.03	<0.03	0.2	2
-	-	10	50
<0.1	<0.1	10	50
NA	NA	NS	NS
NA	NA	125	250
NA	NA	0.2	1
NA	NA	NS	NS
NA	NA	2	10
NA	NA	125	250
NA	NA	0.003	0.03
NA	NA	0.003	0.03
NA	NA	0.003	0.03
NA	NA	0.003	0.03
NA	NA	0.003	0.03
NA	NA	0.003	0.03
NA	NA	0.003	0.03
NA	NA	*	*
NA	NA	NS	NS
NA	NA	NS	NS
NA	NA	NS	NS
NA	NA	1.2	6

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Analytical Results for MW-6
Schmalz Dump Superfund Site

TABLE 1 (continued)

PARAMETER	UNITS	8/93		11/93	2/94	6/94	04/21/1998	07/21/1998	11/02/1998		09/09/2003	NR 140 PAL	NR 140 ES
Metals, dissolved			Duplicate						LF-NF	LF-F			
Arsenic	ug/l	< 3.0	< 3.0	< 100	< 100	< 100	< 0.6	< 0.8	< 0.8	< 0.8	-	5	50
Barium	ug/l	310	350	310	280	220	260	320	320	340	348	400	2000
Cadmium	ug/l	< 10	< 10	< 10	< 10	< 10	< 0.02	0.04	0.36	< 0.04	<0.05	0.5	5
Chromium	ug/l	3	3	< 10	< 10	< 10	2.9	3	4	1	2	10	100
Lead	ug/l	< 50	< 50	< 50	< 50	< 50	< 0.4	< 0.8	< 0.8	< 0.8	4	1.5	15
Mercury	ug/l	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	NA	NA	NA	NA	<0.03	0.2	2
Selenium	ug/l	< 3	< 3	< 100	< 100	< 100	4	< 1	< 1	< 1	-	10	50
Silver	ug/l	< 10	< 10	< 10	< 10	< 10	0.23	< 0.2	0.08*	< 0.2	0.1	10	50
Common Anions													
Fluoride	mg/l	< 5.2	< 5.2	< 5.2	< 5.2	< 3.2	NA	NA	NA	NA	NA	NS	NS
Chloride	mg/l	49	49	48	48	45	NA	NA	NA	NA	NA	125	250
Nitrite as N	mg/l	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	NA	NA	NA	NA	NA	0.2	1
Bromide	mg/l	0.41	0.39	0.38	0.4	0.4	NA	NA	NA	NA	NA	NS	NS
Nitrate as N	mg/l	0.031	< 0.025	< 0.025	< 0.025	< 0.025	NA	NA	NA	NA	NA	2	10
Sulfate	mg/l	240	280	240	220	240	NA	NA	NA	NA	NA	125	250
PCBs													
PCB 1016	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1221	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1232	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1242	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1248	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1254	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
PCB 1260	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	NA	NA	NA	0.003	0.03
Pesticides	ug/l	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	*	*
Miscellaneous													
TOX	ug/l	230	66	64.9	140	75.2	NA	NA	NA	NA	NA	NS	NS
TOC	mg/l	61.6	45.9	72.1	82	47.8	NA	NA	NA	NA	NA	NS	NS
TSS	mg/l	27	30	49	120	220	NA	NA	NA	NA	NA	NS	NS
Phenol	mg/l	< 0.020	< 0.020	< 0.020	< 0.020	0.0738	NA	NA	NA	NA	NA	1.2	6

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Attachment 4

Public Outreach By WDNR



NEWS RELEASE

Wisconsin Department of Natural Resources Northeast Region

1125 N. Military Avenue; PO Box 10448, Green Bay, WI 54307-0448
Phone: (920) 492-5822 TDD: (920) 492-5805
www.dnr.state.wi.us www.wisconsin.gov

DATE: August 28, 2003
CONTACT: Alan Nass, DNR Project Manager, 920-492-5861
SUBJECT: DNR reviews Schmalz Dump Superfund Site in Town of Harrison

TOWN OF HARRISON, Wis. – The Wisconsin Department of Natural Resources has begun a five-year review of the Schmalz Dump Superfund site located in the Town of Harrison in Calumet County.

The Federal Superfund law requires a review at least every five years at sites where the cleanup is complete, but where low levels of hazardous waste remain on the site. The DNR conducts the review to make sure the cleanup still protects people and the environment.

The cleanup which was begun in 1987 included placing a fence with locked gates around the site to limit access; excavation, hauling away, and proper disposal of 4500 tons of soil and debris contaminated with polychlorinated biphenyls (PCBs); placing a landfill "cap" made of compacted clays and topsoil over the remaining waste to keep it from direct human contact and from entering nearby soil, surface water, ground water and the air; and the testing of ground water.

This is the second such review of the Schmalz Dump site since cleanup work was completed in 1994. The first five-year review in 1998 found contaminants in groundwater to be at stable concentrations.

During the current review, the DNR will study ground water samples collected over time, inspect the site, and decide how often the ground water should be tested in the future. The DNR will then prepare a report of its findings. This Five-Year Review Report will be complete by November 2003.

The DNR invites comments and solicits information that you think might be important in this site review. Please provide your comments or direct questions by September 12, 2003 to Alan Nass, DNR Project Manager, 920-492-5861 or e-mail to alan.nass@dnr.state.wi.us.